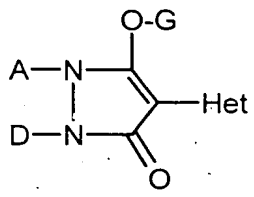
Patent claims

1. A compound of the formula (I)



(I),

in which

Het represents in each case optionally substituted thiazolyl (A), oxazolyl (B) or pyrazolyl (C),

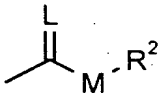
A represents hydrogen, in each case optionally halogen-substituted alkyl, alkenyl or alkoxyalkyl,

D represents hydrogen or an optionally substituted radical from the group consisting of alkyl, alkenyl, alkynyl, alkoxyalkyl, polyalkoxyalkyl, alkylthioalkyl, saturated or unsaturated cycloalkyl in which optionally one or more ring members are replaced by heteroatoms, arylalkyl, aryl, hetarylalkyl or hetaryl, or

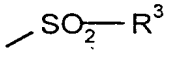
A and D together with the atoms to which they are attached represent a saturated or unsaturated cycle which is unsubstituted or substituted in the A, D moiety and optionally contains at least one heteroatom,

G represents hydrogen (a) or represents one of the groups

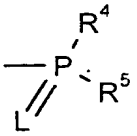
(b),



(c),

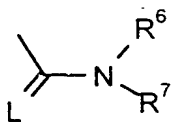


(d),



(e),

E (f) or



(g),

in which

E represents a metal ion equivalent or an ammonium ion,

L represents oxygen or sulfur,

M represents oxygen or sulfur,

R^1 represents in each case optionally cyano- or halogen-substituted alkyl, alkenyl, alkoxyalkyl, alkylthioalkyl, polyalkoxyalkyl or optionally halogen-, alkyl- or alkoxy-substituted cycloalkyl which may be interrupted by at least one heteroatom, represents in each case optionally substituted phenyl, phenylalkyl, hetaryl, phenoxyalkyl or hetaryloxyalkyl,

R^2 represents in each case optionally halogen-substituted alkyl, alkenyl, alkoxyalkyl, polyalkoxyalkyl or represents in each case optionally substituted cycloalkyl, phenyl or benzyl,

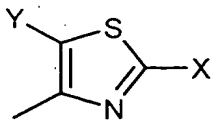
R^3 represents alkyl, haloalkyl or represents in each case optionally substituted phenyl or benzyl,

R^4 and R^5 independently of one another represent in each case optionally halogen-substituted alkyl, alkoxy, alkylamino, dialkylamino, alkylthio, alkenylthio, cycloalkylthio and represent in each case optionally substituted phenyl, benzyl, phenoxy or phenylthio,

R^6 and R^7 independently of one another represent hydrogen, in each case optionally halogen-substituted alkyl, cycloalkyl, alkenyl, alkoxy, alkoxyalkyl, represent optionally substituted phenyl, represent optionally substituted benzyl, or together with the nitrogen atom to which they are attached represent a cycle which is optionally interrupted by oxygen or sulfur.

2. The compound of the formula (I) as claimed in claim 1, in which

Het represents



(I-1)

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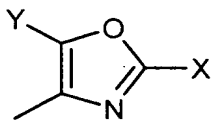

(I-2)

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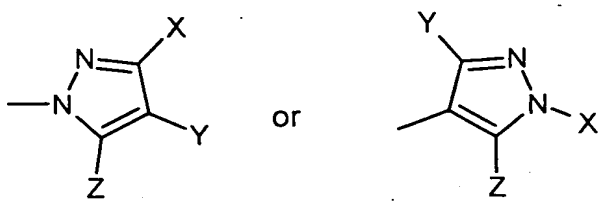


(I-3) or (I-4)

X represents C_1-C_6-alkyl, C_1-C_4-haloalkyl, represents optionally halogen-, C_1-C_6-alkyl-, C_1-C_6-alkoxy-, C_1-C_4-haloalkyl-, C_1-C_4-haloalkoxy-, nitro- or cyano-substituted phenyl,

Y represents hydrogen, C_1-C_6-alkyl, chlorine or bromine,

Z represents C_1-C_6-alkyl, hydroxyl, C_1-C_6-alkoxy, C_1-C_6-haloalkoxy or in each case optionally C_1-C_6-alkyl-, C_1-C_6-alkoxy-, halogen-, C_1-C_4-haloalkyl-, C_1-C_6-haloalkoxy-, cyano- or nitro-substituted phenyl-C_1-C_2-alkyloxy or hetaryl-C_1-C_2-alkyloxy or optionally C_1-C_2-alkyl- or halogen-substituted C_3-C_6-cycloalkyl,

A represents hydrogen, in each case optionally halogen-substituted C_1-C_6-alkyl, C_1-C_6-alkenyl or C_1-C_4-alkoxy-C_1-C_3-alkyl,

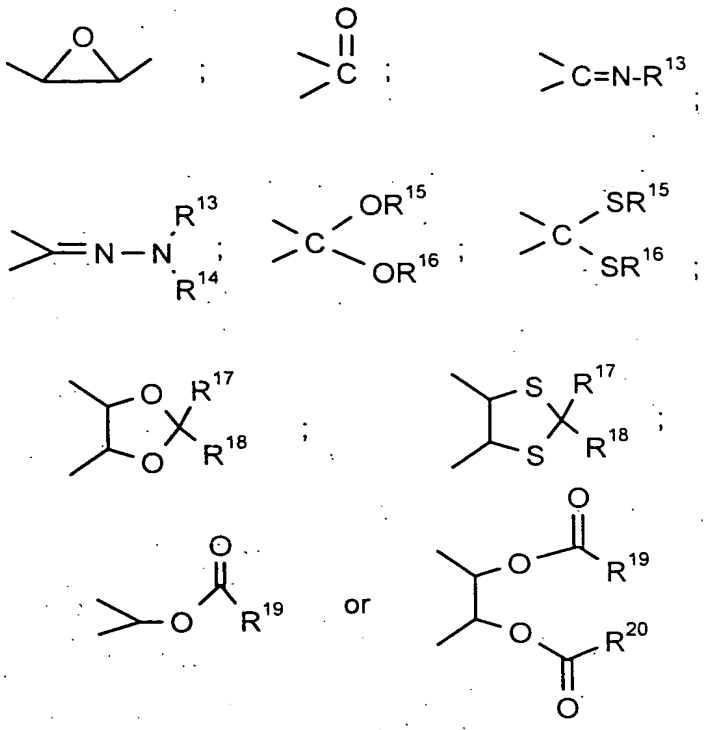
D represents hydrogen, in each case optionally halogen-substituted C_1-C_{12}-alkyl,-C_3-C_8-alkenyl, C_3-C_8-alkynyl, C_1-C_{10}-alkoxy-C_1-C_8-alkyl, poly-C_1-C_8-alkoxy-C_1-C_8-alkyl, C_1-C_{10}-alkylthio-C_2-C_8-alkyl, optionally halogen-, C_1-C_4-alkyl-, C_1-C_4-haloalkyl-, C_1-C_4-alkoxy- or C_1-C_4-haloalkyl-substituted C_3-C_8-cycloalkyl in which optionally one ring member is replaced by oxygen or sulfur, or represents in each case optionally halogen-, C_1-C_6-alkyl-, C_1-C_6-haloalkyl-, C_1-C_6-alkoxy-, C_1-C_6-haloalkoxy-, cyano- or nitro-substituted phenyl, hetaryl having 5 or 6 ring atoms, phenyl-C_1-C_6-alkyl or hetaryl-C_1-C_6-alkyl having 5 or 6 ring atoms, or

A and D together represent in each case optionally substituted C_3-C_6-alkanediyl or C_3-C_6-alkenediyl in which optionally one methylene group is replaced by nitrogen, oxygen or sulfur,

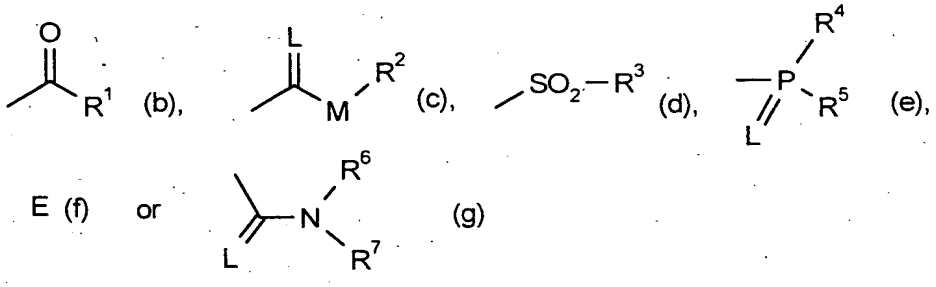
possible substituents being in each case:

halogen, hydroxyl, mercapto or in each case optionally halogen-substituted C_1-C_{10}-alkyl, C_1-C_6-alkoxy, C_1-C_6-alkylthio, C_3-C_7-cycloalkyl, phenyl or benzyl-

oxy, or a further C_3-C_6-alkanediyl grouping, C_3-C_6-alkenediyl grouping or a butadienyl grouping which is optionally substituted by C_1-C_6-alkyl or which optionally contains one of the following groups



G represents hydrogen (a) or represents one of the groups



in which

E represents a metal ion equivalent or an ammonium ion,

L represents oxygen or sulfur and

M represents oxygen or sulfur,

R^1 represents in each case optionally halogen-substituted C_1-C_{20}-alkyl, C_2-C_{20}-alkenyl, C_1-C_8-alkoxy-C_1-C_8-alkyl, C_1-C_8-alkylthio-C_1-C_8-alkyl, poly-C_1-C_8-

alkoxy-C_1-C_8-alkyl or optionally halogen-, C_1-C_6-alkyl- or C_1-C_6-alkoxy-substituted C_3-C_8-cycloalkyl in which optionally one or more not directly adjacent ring members are replaced by oxygen and/or sulfur,

represents optionally halogen-, cyano-, nitro-, C_1-C_6-alkyl-, C_1-C_6-alkoxy-, C_1-C_6-haloalkyl-, C_1-C_6-haloalkoxy-, C_1-C_6-alkylthio- or C_1-C_6-alkylsulfonyl-substituted phenyl,

represents optionally halogen-, nitro-, cyano-, C_1-C_6-alkyl-, C_1-C_6-alkoxy-, C_1-C_6-haloalkyl- or C_1-C_6-haloalkoxy-substituted phenyl-C_1-C_6-alkyl,

represents optionally halogen-, C_1-C_6-alkyl-, C_1-C_2-haloalkyl- or C_1-C_4-alkoxy-substituted 5- or 6-membered hetaryl,

represents optionally halogen- or C_1-C_6-alkyl-substituted phenoxy-C_1-C_6-alkyl or

represents optionally halogen-, amino- or C_1-C_6-alkyl-substituted 5- or 6-membered hetaryloxy-C_1-C_6-alkyl,

R^2 represents in each case optionally halogen-substituted C_1-C_{20}-alkyl, C_2-C_{20}-alkenyl, C_1-C_8-alkoxy-C_2-C_8-alkyl, poly-C_1-C_8-alkoxy-C_2-C_8-alkyl,

represents optionally halogen-, C_1-C_6-alkyl- or C_1-C_6-alkoxy-substituted C_3-C_8-cycloalkyl in which optionally one ring atom is replaced by oxygen, or

represents in each case optionally halogen-, cyano-, nitro-, C_1-C_6-alkyl-, C_1-C_6-alkoxy-, C_1-C_6-haloalkyl- or C_1-C_6-haloalkoxy-substituted phenyl or benzyl,

R^3 represents optionally halogen-substituted C_1-C_8-alkyl or represents in each case optionally halogen-, C_1-C_6-alkyl-, C_1-C_6-alkoxy-, C_1-C_4-haloalkyl-, C_1-C_4-haloalkoxy-, cyano- or nitro-substituted phenyl or benzyl,

R^4 and R^5 independently of one another represent in each case optionally halogen-substituted C_1-C_8-alkyl, C_1-C_8-alkoxy, C_1-C_8-alkylamino, di(C_1-C_8-alkyl)amino, C_1-C_8-alkylthio, C_2-C_8-alkenylthio, C_3-C_7-cycloalkylthio or represent in each case optionally halogen-, nitro-, cyano-, C_1-C_4-alkoxy-, C_1-C_4-haloalkoxy-, C_1-C_4-alkylthio-, C_1-C_4-haloalkylthio-, C_1-C_4-alkyl- or C_1-C_4-haloalkyl-substituted phenyl, phenoxy or phenylthio,

R^6 and R^7 independently of one another represent hydrogen, represent in each case optionally halogen-substituted C_1-C_8-alkyl, C_3-C_8-cycloalkyl, C_1-C_8-alkoxy, C_3-C_8-alkenyl, C_1-C_8-alkoxy-C_1-C_8-alkyl, represent optionally halogen-, C_1-C_8-haloalkyl-, C_1-C_8-alkyl- or C_1-C_8-alkoxy-substituted phenyl, optionally halogen-, C_1-C_8-alkyl-, C_1-C_8-haloalkyl- or C_1-C_8-alkoxy-substituted benzyl or together represent an optionally C_1-C_4-alkyl-substituted C_3-C_6-alkylene radical in which optionally one carbon atom is replaced by oxygen or sulfur,

R^{13} represents in each case optionally halogen-substituted C_1-C_4-alkyl or C_1-C_4-alkoxy or represents in each case optionally C_1-C_2-alkyl- or C_1-C_2-alkoxy-substituted cyclopropyl or cyclohexyl, or

R^{14} represents hydrogen or C_1-C_8-alkyl, or

R^{13} and R^{14} together represent C_4-C_6-alkanediyl,

R^{15} and R^{16} are identical or different and represent C_1-C_4-alkyl, or

R^{15} and R^{16} together represent a C_2-C_4-alkanediyl radical which is optionally mono- or disubstituted by C_1-C_4-alkyl,

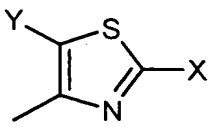
R^{17} and R^{18} independently of one another represent hydrogen, represent optionally halogen-substituted C_1-C_6-alkyl or represent optionally halogen-, C_1-C_6-alkyl-, C_1-C_6-alkoxy-, C_1-C_4-haloalkyl-, C_1-C_4-haloalkoxy-, nitro- or cyano-substituted phenyl, or

R^{17} and R^{18} together with the carbon atom to which they are attached represent a carbonyl group or represent optionally C_1-C_2-alkyl- or C_1-C_2-alkoxy-substituted C_5-C_7-cycloalkyl in which optionally one methylene group is replaced by oxygen or sulfur,

R^{19} and R^{20} independently of one another represent C_1-C_4-alkyl, C_2-C_4-alkenyl, C_1-C_4-alkoxy, C_1-C_4-alkylamino, C_3-C_4-alkenylamino, di-(C_1-C_4-alkyl)amino or di-(C_3-C_4-alkenyl)amino.

3. The compound of the formula (I) as claimed in claim 1 in which

Het represents



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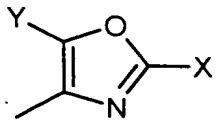
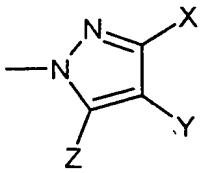
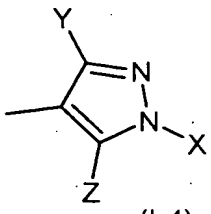


(I-2)



or



(I-3) (I-4)

X represents C_1-C_4-alkyl, C_1-C_2-haloalkyl, represents phenyl which is optionally mono- to trisubstituted by fluorine, chlorine, bromine, C_1-C_4-alkyl, C_1-C_4-alkoxy, C_1-C_2-haloalkyl, C_1-C_2-haloalkoxy, nitro or cyano,

Y represents hydrogen, C_1-C_4-alkyl or, in the case of Het (I-1) and (I-3), also represents chlorine or bromine,

Z represents C_1-C_4-alkyl, C_1-C_4-alkoxy, C_1-C_4-haloalkoxy or represents benzyloxy or hetarylmethyloxy having 5 or 6 ring atoms, each of which radicals is optionally mono- or disubstituted by C_1-C_4-alkyl, C_1-C_4-alkoxy, fluorine, chlorine, bromine, C_1-C_2-haloalkyl, C_1-C_2-haloalkoxy, cyano or nitro,

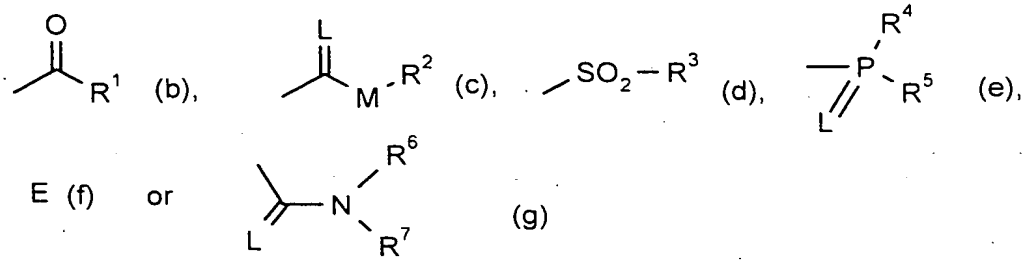
A represents hydrogen or represents C_1-C_4-alkyl, C_1-C_4-alkenyl or C_1-C_3-alkoxy-C_1-C_2-alkyl, each of which is optionally mono- to trisubstituted by fluorine;

D represents hydrogen, represents C_1-C_{10}-alkyl, C_3-C_6-alkenyl, C_1-C_6-alkoxy-C_1-C_4-alkyl or C_1-C_6-alkylthio-C_1-C_4-alkyl, each of which is optionally mono- to trisubstituted by fluorine, represents C_3-C_7-cycloalkyl in which optionally one methylene group is replaced by oxygen or sulfur and which is optionally monosubstituted by fluorine, C_1-C_4-alkyl, C_1-C_4-alkoxy or C_1-C_2-haloalkyl, or represents in each case optionally fluorine-, chlorine-, bromine-, C_1-C_4-alkyl-, C_1-C_2-haloalkyl-, C_1-C_4-alkoxy- or C_1-C_2-haloalkoxy-substituted phenyl or phenyl-C_1-C_4-alkyl, or

A and D together represent optionally mono- or disubstituted C_3-C_5-alkanediyl or C_3-C_5-alkenediyl in which optionally one methylene group may be replaced by a

carbonyl group, oxygen or sulfur, possible substituents being hydroxyl, C_1-C_6-alkyl or C_1-C_4-alkoxy,

G represents hydrogen (a) or represents one of the groups



(b), (c), (d), (e),

E (f) or (g)

in which

E represents a metal ion equivalent or an ammonium ion,

L represents oxygen or sulfur and

M represents oxygen or sulfur,

R^1 represents C_1-C_{16}-alkyl, C_2-C_{16}-alkenyl, C_1-C_6-alkoxy-C_1-C_4-alkyl, C_1-C_6-alkylthio-C_1-C_4-alkyl, each of which is optionally mono- to pentasubstituted by fluorine or chlorine, or represents C_3-C_7-cycloalkyl in which optionally one or two not directly adjacent ring members are replaced by oxygen and/or sulfur and which is optionally mono- or disubstituted by fluorine, chlorine, C_1-C_5-alkyl or C_1-C_5-alkoxy,

represents phenyl which is optionally mono- or disubstituted by fluorine, chlorine, bromine, cyano, nitro, C_1-C_4-alkyl, C_1-C_4-alkoxy, C_1-C_3-haloalkyl, C_1-C_3-haloalkoxy, C_1-C_4-alkylthio or C_1-C_4-alkylsulfonyl,

represents phenyl-C_1-C_4-alkyl which is optionally mono- or disubstituted by fluorine, chlorine, bromine, C_1-C_4-alkyl, C_1-C_4-alkoxy, C_1-C_3-haloalkyl or C_1-C_3-haloalkoxy,

represents pyrazolyl, thiazolyl, pyridyl, pyrimidyl, furanyl or thienyl, each of which is optionally mono- or disubstituted by fluorine, chlorine, bromine, C_1-C_4-alkyl, trifluoromethyl or C_1-C_2-alkoxy,

R^2 represents C_1-C_{16}-alkyl, C_2-C_{16}-alkenyl or C_1-C_6-alkoxy-C_2-C_6-alkyl, each of which is optionally mono- to pentasubstituted by fluorine,

represents C_3-C_7-cycloalkyl which is optionally mono- or disubstituted by fluorine, chlorine, C_1-C_4-alkyl or C_1-C_4-alkoxy, or

represents phenyl or benzyl, each of which is optionally mono- or disubstituted by fluorine, chlorine, bromine, cyano, nitro, C_1-C_4-alkyl, C_1-C_3-alkoxy, C_1-C_2-haloalkyl or C_1-C_2-haloalkoxy,

R^3 represents C_1-C_6-alkyl which is optionally mono- to pentasubstituted by fluorine or represents phenyl which is optionally mono- or disubstituted by fluorine, chlorine, bromine, C_1-C_4-alkyl, C_1-C_4-alkoxy, C_1-C_3-haloalkyl, C_1-C_3-haloalkoxy, cyano or nitro,

R^4 represents C_1-C_6-alkyl, C_1-C_6-alkoxy, C_1-C_6-alkylamino, di-(C_1-C_6-alkyl)amino, C_1-C_6-alkylthio C_3-C_4-alkenylthio, C_3-C_6-cycloalkylthio, each of which is optionally mono- to trisubstituted by fluorine, or represents phenyl, phenoxy or phenylthio, each of which is optionally mono- or disubstituted by fluorine, chlorine, bromine, nitro, cyano, C_1-C_3-alkoxy, C_1-C_3-haloalkoxy, C_1-C_3-alkylthio, C_1-C_3-haloalkylthio, C_1-C_3-alkyl or C_1-C_3-haloalkyl,

R^5 represents C_1-C_6-alkoxy or C_1-C_6-alkylthio,

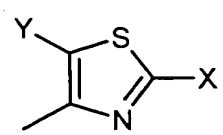
R^6 represents C_1-C_6-alkyl, C_3-C_6-cycloalkyl, C_1-C_6-alkoxy, C_3-C_6-alkenyl, C_1-C_6-alkoxy-C_1-C_6-alkyl, each of which is mono- to trisubstituted by fluorine, represents phenyl which is optionally mono- or disubstituted by fluorine, chlorine, bromine, C_1-C_3-haloalkyl, C_1-C_4-alkyl or C_1-C_4-alkoxy, represents benzyl which is optionally mono- or disubstituted by fluorine, chlorine, bromine, C_1-C_4-alkyl, C_1-C_3-haloalkyl or C_1-C_4-alkoxy,

R^7 represents hydrogen, C_1-C_6-alkyl, C_3-C_6-alkenyl, or

R^6 and R^7 together represent a C_4-C_5-alkylene radical in which optionally one methylene group is replaced by oxygen or sulfur and which is optionally mono- or disubstituted by methyl or ethyl.

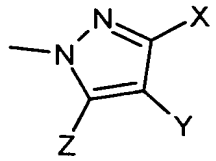
4. The compound of the formula (I) as claimed in claim 1 in which

Het represents



(I-1)

or



(I-3)

X represents methyl, ethyl, propyl, trifluoromethyl, represents phenyl which is optionally mono- or disubstituted by fluorine, chlorine, bromine, methyl, ethyl, trifluoromethyl, isopropyl, tert-butyl, trifluoromethoxy, methoxy, ethoxy, isopropoxy, tert-butoxy, cyano or nitro,

Y represents hydrogen in the case of Het (I-3) or represents methyl, ethyl, propyl, chlorine or bromine in the case of Het (I-1),

Z represents methyl, ethyl, propyl, isopropyl, methoxy, ethoxy, propoxy, isopropoxy, difluoromethoxy or trifluoroethoxy,

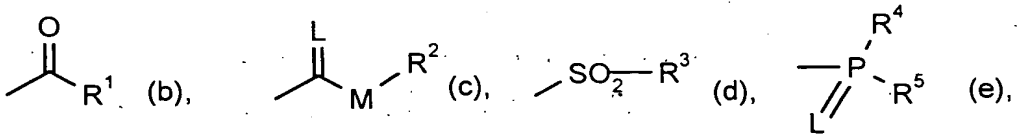
A represents hydrogen, methyl or ethyl,

D represents hydrogen, represents methyl, ethyl, allyl, each of which is optionally mono- to trisubstituted by fluorine, or represents phenyl which is optionally mono- or disubstituted by fluorine, chlorine, methyl, ethyl, n-propyl, isopropyl, methoxy, ethoxy, trifluoromethyl or trifluoromethoxy,

or

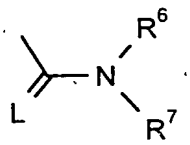
A and D together represent optionally substituted C_3-C_5-alkanediyl in which optionally one carbon atom is replaced by oxygen and which is optionally mono- or disubstituted by methyl, ethyl, methoxy or ethoxy,

G represents hydrogen (a) or represents one of the groups



(b), (c), (d), (e),

E (f) or



(g)

in which

E represents a metal ion equivalent or an ammonium ion,

L represents oxygen or sulfur and

M represents oxygen or sulfur,

R^1 represents C_1-C_8-alkyl, C_2-C_8-alkenyl, C_1-C_2-alkoxy-C_1-C_2-alkyl, C_1-C_2-alkylthio-C_1-C_2-alkyl, each of which is optionally mono- to trisubstituted by fluorine, or represents cyclopropyl, cyclopentyl or cyclohexyl, each of which is optionally monosubstituted by fluorine, chlorine, methyl, ethyl or methoxy,

represents phenyl which is optionally mono- or disubstituted by fluorine, chlorine, bromine, cyano, nitro, methyl, ethyl, tert-butyl, methoxy, ethoxy, trifluoromethyl or trifluoromethoxy,

represents thienyl or pyridyl, each of which is optionally monosubstituted by fluorine, chlorine, bromine or methyl,

R^2 represents C_1-C_8-alkyl, C_2-C_8-alkenyl or C_1-C_4-alkoxy-C_2-C_3-alkyl, each of which is optionally mono- to trisubstituted by fluorine,

represents cyclohexyl which is optionally monosubstituted by fluorine, chlorine, methyl, ethyl, n-propyl, isopropyl or methoxy,

or represents phenyl or benzyl, each of which is optionally monosubstituted by fluorine, chlorine, cyano, nitro, methyl, ethyl, methoxy, trifluoromethyl or trifluoromethoxy,

R^3 represents methyl, ethyl, n-propyl or represents phenyl which is optionally monosubstituted by fluorine, chlorine, bromine, methyl, tert-butyl, methoxy, trifluoromethyl, trifluoromethoxy, cyano or nitro,

R^4 represents C_1-C_4-alkyl, C_1-C_4-alkoxy, C_1-C_4-alkylamino, di-(C_1-C_4-alkyl)amino, C_1-C_4-alkylthio, each of which is optionally mono- to trisubstituted by fluorine, or represents phenyl, phenoxy or phenylthio, each of which is optionally monosubstituted by fluorine, chlorine, bromine, nitro, cyano, C_1-C_2-alkoxy, C_1-C_2-fluoroalkoxy, C_1-C_2-alkylthio, C_1-C_2-fluoroalkylthio or C_1-C_3-alkyl,

R^5 represents methoxy, ethoxy, methylthio or ethylthio,

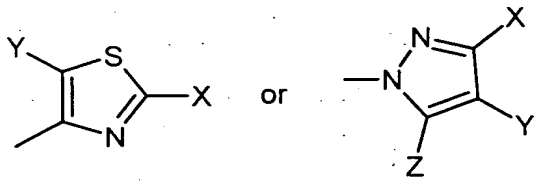
R^6 represents C_1-C_4-alkyl, C_3-C_6-cycloalkyl, C_1-C_4-alkoxy, C_3-C_4-alkenyl, C_1-C_4-alkoxy-C_1-C_4-alkyl, each of which is optionally mono- to trisubstituted by fluorine, represents phenyl which is optionally monosubstituted by fluorine, chlorine, bromine, trifluoromethyl, methyl or methoxy, represents benzyl which is optionally monosubstituted by fluorine, chlorine, bromine, methyl, trifluoromethyl or methoxy,

R^7 represents hydrogen, methyl, ethyl, propyl or allyl, or

R^6 and R^7 together represent a C_5-C_6-alkylene radical in which optionally one methylene group is replaced by oxygen or sulfur.

5. The compound of the formula (I) as claimed in claim 1 in which

Het represents



(I-1) or (I-3),

X represents phenyl which is optionally mono- or disubstituted by fluorine, chlorine, bromine, methyl, trifluoromethyl, methoxy or trifluoromethoxy,

Y represents hydrogen in the case of Het (I-3) or methyl, ethyl or propyl in the case of Het (I-1),

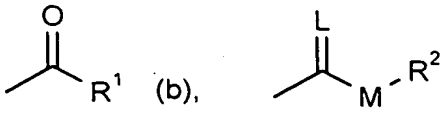
Z represents methyl, ethyl, propyl or isopropyl,

A represents methyl or ethyl,

D represents methyl or ethyl,

A and D represent C_3-C_5-alkanediyl in which optionally one carbon atom is replaced by an oxygen atom,

G represents hydrogen (a) or represents one of the groups



in which

L represents oxygen and

M represents oxygen,

R^1 represents C_1-C_8-alkyl, C_2-C_4-alkenyl, C_1-C_2-alkoxy-C_1-C_2-alkyl, C_1-C_2-alkylthio-C_1-C_2-alkyl, cyclopropyl or cyclohexyl,

represents phenyl which is optionally monosubstituted by fluorine, chlorine, bromine, cyano, nitro, methyl, ethyl, tert-butyl, methoxy, tert-butoxy, trifluoromethyl or trifluoromethoxy,

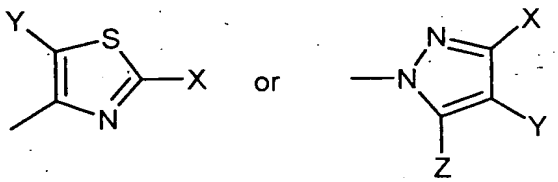
represents pyridyl which is optionally monosubstituted by chlorine or methyl,

R^2 represents C_1-C_8-alkyl, C_2-C_4-alkenyl or C_1-C_4-alkoxy-C_2-C_3-alkyl,

or represents phenyl or benzyl, each of which is optionally monosubstituted by fluorine, chlorine, cyano, nitro, methyl, ethyl, methoxy, trifluoromethyl or trifluoromethoxy.

6. The compound of the formula (I) as claimed in claim 1 in which

Het represents



(I-1) (I-3)

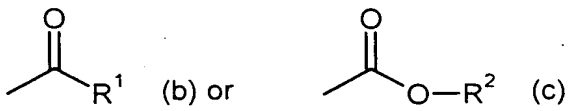
X represents phenyl which is optionally monosubstituted by chlorine,

Y represents hydrogen in the case of Het (I-3) or methyl or propyl in the case of Het (I-1),

Z represents methyl,

A and D represent C_3-C_5-alkanediyl in which optionally one carbon atom is replaced by an oxygen atom,

G represents hydrogen (a) or represents one of the groups

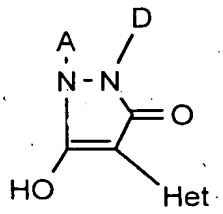


R^1 represents C_1-C_8-alkyl,

R^2 represents C_1-C_8-alkyl.

7. A process for preparing compounds of the formula (I) as claimed in claim 1, characterized in that, to obtain

A) compounds of the formulae(I-1-a) to (I-4-a),

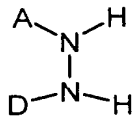


(I-1-a) to (I-4-a)

in which

A, D and Het are as defined above,

compounds of the formula (II)

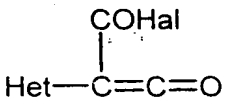


(II)

in which

A and D are as defined above

α) are reacted with compounds of the formula (III)



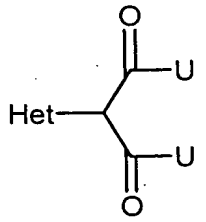
(III)

in which

Het is as defined above,

if appropriate in the presence of a diluent and if appropriate in the presence of an acid acceptor, or

ß) are reacted with compounds of the formula (IV)



(IV)

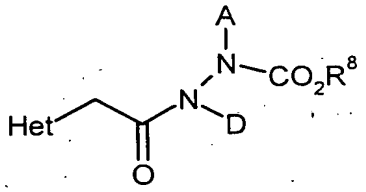
in which

Het is as defined above

and U represents C-R^8, where R^8 = C_1-C_8-alkyl,

if appropriate in the presence of a diluent and if appropriate in the presence of a base, or

γ) are reacted with compounds of the formula (V)



(V)

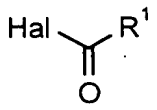
in which

A, D, Het and R^8 are as defined above,

if appropriate in the presence of a diluent and if appropriate in the presence of a base,

(B) compounds of the formulae (I-1-b) to (I-4-b) shown above in which A, D, R^1 and Het are as defined above, compounds of the formulae (I-1-a) to (I-4-a) shown above in which A, D and Het are as defined above are in each case

(α) reacted with acid halides of the formula (VI)



(VI)

in which

R^1 is as defined above and

Hal represents halogen

or

(ß) reacted with carboxylic anhydrides of the formula (VII)

$$R^1\text{-CO-O-CO-}R^1 \qquad \text{(VII)}$$

in which

R^1 is as defined above,

if appropriate in the presence of a diluent and if appropriate in the presence of an acid binder;

(C) compounds of the formulae (I-1-c) to (I-4-c) shown above in which A, D, R^2, M and Het are as defined above and L represents oxygen, compounds of the formulae (I-1-a) to (I-4-a) shown above in which A, D and Het are as defined above are in each case

reacted with chloroformic esters or chloroformic thioesters of the formula (VIII)

$$R^2\text{-M-CO-Cl} \qquad \text{(VIII)}$$

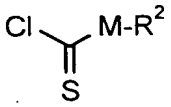
in which

R^2 and M are as defined above,

if appropriate in the presence of a diluent and if appropriate in the presence of an acid binder;

(D) compounds of the formulae (I-1-c) to (I-4-c) shown above in which A, D, R^2, M and Het are as defined above and L represents sulfur, compounds of the formulae (I-1-a) to (I-4-a) shown above in which A, D and Het are as defined above are in each case

reacted with chloromonothioformic esters or chlorodithioformic esters of the formula (XI)



(IX)

in which

M and R^2 are as defined above,

if appropriate in the presence of a diluent and if appropriate in the presence of an acid binder,

and

(E) compounds of the formulae (I-1-d) to (I-4-d) shown above in which A, D, R^3 and Het are as defined above, compounds of the formulae (I-1-a) to (I-4-a) shown above in which A, D and Het are as defined above are in each case

reacted with sulfonyl chlorides of the formula (X)

$$R^3\text{-}SO_2\text{-}Cl \qquad (X)$$

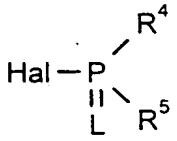
in which

R^3 is as defined above,

if appropriate in the presence of a diluent and if appropriate in the presence of an acid binder,

(F) compounds of the formulae (I-1-e) to (I-4-e) shown above in which A, D, L, R^4, R^5 and Het are as defined above, compounds of the formulae (I-1-a) to (I-4-a) shown above in which A, D and Het are as defined above are in each case

reacted with phosphorus compounds of the formula (XI)



(XI)

in which

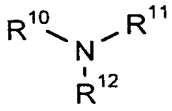
L, R^4 and R^5 are as defined above and

Hal represents halogen,

if appropriate in the presence of a diluent and if appropriate in the presence of an acid binder,

(G) compounds of the formulae (I-1-f) to (I-4-f) shown above in which A, D, E and Het are as defined above, compounds of the formulae (I-1-a) to (I-4-a) in which A, D and Het are as defined above are in each case

reacted with metal compounds or amines of the formulae (XII) and (XIII), respectively,

$Me(OR^{10})_t$ (XII)  (XIII)

in which

Me represents a mono- or divalent metal

t represents the number 1 or 2 and

R^{10}, R^{11}, R^{12} independently of one another represent hydrogen or alkyl,

if appropriate in the presence of a diluent,

(H) compounds of the formulae (I-1-g) to (I-4-g) shown above in which A, D, L, R^6, R^7 and Het are as defined above, compounds of the formulae (I-1-a) to (I-4-a) shown above in which A, D and Het are as defined above are in each case

(α) reacted with isocyanates or isothiocyanates of the formula (XIV)

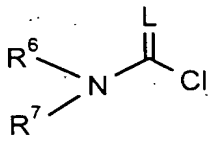
R^6-N=C=L (XIV)

in which

R^6 and L are as defined above,

if appropriate in the presence of a diluent and if appropriate in the presence of a catalyst, or

(ß) reacted with carbamide chlorides or thiocarbamide chlorides of the formula (XV)



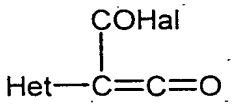
(XV)

in which

L, R^6 and R^7 are as defined above,

if appropriate in the presence of a diluent and if appropriate in the presence of an acid binder.

8. A compound of the formula (III)

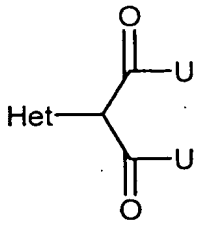


(III)

in which

Het and Hal are as defined above.

9. A compound of the formula (IV)



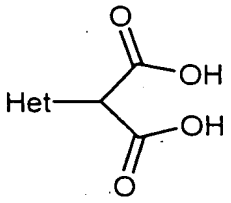
(IV)

in which

Het and U are as defined above,

except for diethyl (1,3,5-trimethyl-1H-pyrazolyl)malonate and diethyl [1-(2,4-dinitrophenyl)-3,5-dimethyl-1H-pyrazol-4-yl]malonate.

10. A compound of the formula (IV-a)

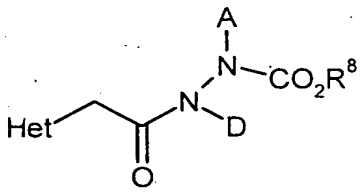


(IV-a)

in which

Het is as defined above,

11. A compound of the formula (V)

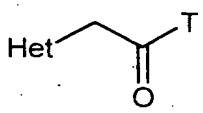


(V)

in which

A, D, Het and R^8 are as defined above.

12. A compound of the formula (XVIII)



(XVIII)

in which

Het and T are as defined above.

13. A pesticide and/or herbicide, characterized in that it comprises at least one compound of the formula (I) as claimed in claim 1.

14. A method for controlling animal pests and/or unwanted vegetation, characterized in that compounds of the formula (I) as claimed in claim 1 are allowed to act on pests and/or their habitat.

15. The use of compounds of the formula (I) as claimed in claim 1 for controlling animal pests and/or unwanted vegetation.

16. A process for preparing pesticides and/or herbicides, characterized in that compounds of the formula (I) as claimed in claim 1 are mixed with extenders and/or surfactants.

17. The use of compounds of the formula (I) as claimed in claim 1 for preparing pesticides and/or herbicides.

18. A composition, comprising an effective amount of an active compound combination comprising, as components

(a') at least one hetaryl-substituted pyrazolidinedione derivative of the formula (I) in which A, D, G and Het are as defined above

and

(b') at least one crop plant compatibility-improving compound from the following group of compounds:

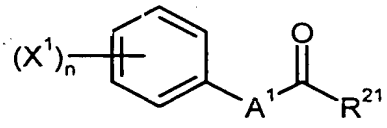
4-dichloroacetyl-1-oxa-4-azaspiro[4.5]decane (AD-67, MON-4660), 1-dichloroacetylhexahydro-3,3,8a-trimethylpyrrolo[1,2-a]pyrimidin-6(2H)-one (dicyclonon, BAS-145138), 4-dichloroacetyl-3,4-dihydro-3-methyl-2H-1,4-benzoxazine (benoxacor), 1-methylhexyl 5-chloroquinoline-8-oxyacetate (cloquintocet-mexyl - cf. also related compounds in EP-A-86750, EP-A-94349, EP-A-191736, EP-A-492366), 3-(2-chlorobenzyl)-1-(1-methyl-1-phenylethyl)urea (cumyluron), α-(cyanomethoximino)phenylacetonitrile (cyometrinil), 2,4-dichlorophenoxyacetic acid (2,4-D), 4-(2,4-dichlorophenoxy)butyric acid (2,4-DB), 1-(1-methyl-1-phenylethyl)-3-(4-methylphenyl)urea (daimuron, dymron), 3,6-dichloro-2-methoxybenzoic acid (dicamba), S-1-methyl 1-phenylethyl piperidine-1-thiocarboxylate (dimepiperate), 2,2-dichloro-N-(2-oxo-2-(2-propenylamino)ethyl)-N-(2-propenyl)acetamide (DKA-24), 2,2-dichloro-N,N-di-2-propenylacetamide (dichlormid), 4,6-dichloro-2-phenylpyrimidine (fenclorim),

ethyl 1-(2,4-dichlorophenyl)-5-trichloromethyl-1H-1,2,4-triazole-3-carboxylate (fenchlorazole-ethyl - cf. also related compounds in EP-A-174562 and EP-A-346620), phenylmethyl 2-chloro-4-trifluoromethylthiazole-5-carboxylate (flurazole), 4-chloro-N-(1,3-dioxolan-2-ylmethoxy)-α-trifluoroacetophenone oxime (fluxofenim), 3-dichloroacetyl-5-(2-furanyl)-2,2-dimethyloxazolidine (furilazole, MON-13900), ethyl 4,5-dihydro-5,5-diphenyl-3-isoxazolecarboxylate (isoxadifen-ethyl – cf. also related compounds in WO-A-95/07897), 1-(ethoxycarbonyl)ethyl 3,6-dichloro-2-methoxybenzoate (lactidichlor), (4-chloro-o-tolyloxy)acetic acid (MCPA), 2-(4-chloro-o-tolyloxy)propionic acid (mecoprop), diethyl 1-(2,4-dichlorophenyl)-4,5-dihydro-5-methyl-1H-pyrazole-3,5-dicarboxylate (mefenpyr-diethyl - cf. also related compounds in WO-A-91/07874), 2-dichloromethyl-2-methyl-1,3-dioxolane (MG-191), 2-propenyl 1-oxa-4-azaspiro[4.5]decane-4-carbodithioate (MG-838), 1,8-naphthalic anhydride, α-(1,3-dioxolan-2-ylmethoximino)phenylacetonitrile (oxabetrinil), 2,2-dichloro-N-(1,3-dioxolan-2-ylmethyl)-N-(2-propenyl)acetamide (PPG-1292), 3-dichloroacetyl-2,2-dimethyloxazolidine (R-28725), 3-dichloroacetyl-2,2,5-trimethyloxazolidine (R-29148), 4-(4-chloro-o-tolyl)butyric acid, 4-(4-chlorophenoxy)butyric acid, diphenylmethoxyacetic acid, methyl diphenylmethoxyacetate, ethyl diphenylmethoxyacetate, methyl 1-(2-chlorophenyl)-5-phenyl-1H-pyrazole-3-carboxylate, ethyl 1-(2,4-dichlorophenyl)-5-methyl-1H-pyrazole-3-carboxylate, ethyl 1-(2,4-dichlorophenyl)-5-isopropyl-1H-pyrazole-3-carboxylate, ethyl 1-(2,4-dichlorophenyl)-5-(1,1-dimethylethyl)-1H-pyrazole-3-carboxylate, ethyl 1-(2,4-dichlorophenyl)-5-phenyl-1H-pyrazole-3-carboxylate (cf. also related compounds in EP-A-269806 and EP-A-333131), ethyl 5-(2,4-dichlorobenzyl)-2-isoxazoline-3-carboxylate, ethyl 5-phenyl-2-isoxazoline-3-carboxylate, ethyl 5-(4-fluorophenyl)-5-phenyl-2-isoxazoline-3-carboxylate (cf. also related compounds in WO-A-91/08202), 1,3-dimethylbut-1-yl 5-chloroquinoline-8-oxyacetate, 4-allyloxybutyl 5-chloroquinoline-8-oxyacetate, 1-allyloxyprop-2-yl 5-chloroquinoline-8-oxyacetate, methyl 5-chloroquinoxaline-8-oxyacetate, ethyl 5-chloroquinoline-8-oxyacetate, allyl 5-chloroquinoxaline-8-oxyacetate, 2-oxoprop-1-yl 5-chloroquinoline-8-oxyacetate, diethyl 5-chloroquinoline-8-oxymalonate, diallyl 5-chloroquinoxaline-8-oxymalonate, diethyl 5-chloroquinoline-8-oxymalonate (cf. also related compounds in EP-A-582198), 4-carboxychroman-4-ylacetic acid

(AC-304415, cf. EP-A-613618), 4-chlorophenoxyacetic acid, 3,3'-dimethyl-4-methoxybenzophenone, 1-bromo-4-chloromethylsulfonylbenzene, 1-[4-(N-2-methoxybenzoylsulfamoyl)phenyl]-3-methylurea (also known as N-(2-methoxybenzoyl)-4-[(methylaminocarbonyl)amino]benzenesulfonamide), 1-[4-(N-2-methoxybenzoylsulfamoyl)phenyl]-3,3-dimethylurea, 1-[4-(N-4,5-dimethyl-benzoylsulfamoyl)phenyl]-3-methylurea, 1-[4-(N-naphthylsulfamoyl)phenyl]-3,3-dimethylurea, N-(2-methoxy-5-methylbenzoyl)-4-(cyclopropylamino-carbonyl)benzenesulfonamide,

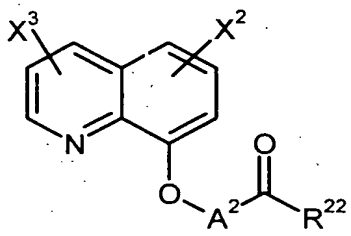
and/or one of the following compounds, defined by general formulae,

of the general formula (IIa)



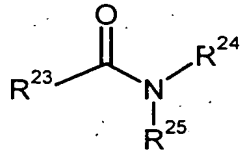
(IIa)

or of the general formula (IIb)



(IIb)

or of the formula (IIc)

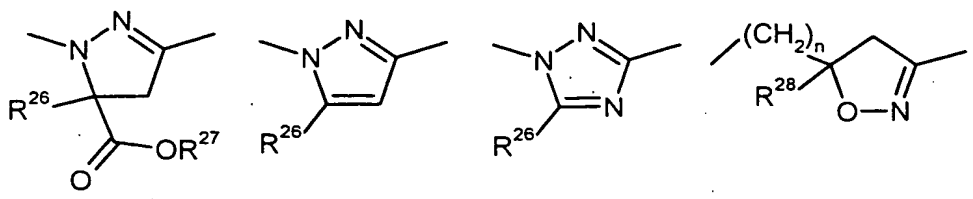


(IIc)

where

n represents a number between 0 and 5,

A^1 represents one of the divalent heterocyclic groupings shown below,



n represents a number between 0 and 5,

A^2 represents optionally C_1-C_4-alkyl- and/or C_1-C_4-alkoxycarbonyl-substituted alkanediyl having 1 or 2 carbon atoms,

R^{21} represents hydroxyl, mercapto, amino, C_1-C_6-alkoxy, C_1-C_6-alkylthio, C_1-C_6-alkylamino or di-(C_1-C_4-alkyl)amino,

R^{22} represents hydroxyl, mercapto, amino, C_1-C_6-alkoxy, C_1-C_6-alkylthio, C_1-C_6-alkylamino or di-(C_1-C_4-alkyl)amino,

R^{23} represents in each case optionally fluorine-, chlorine- and/or bromine-substituted C_1-C_4-alkyl,

R^{24} represents hydrogen, in each case optionally fluorine-, chlorine- and/or bromine-substituted C_1-C_6-alkyl, C_2-C_6-alkenyl or C_2-C_6-alkynyl, C_1-C_4-alkoxy-C_1-C_4-alkyl, dioxolanyl-C_1-C_4-alkyl, furyl, furyl-C_1-C_4-alkyl, thienyl, thiazolyl, piperidinyl, or optionally fluorine-, chlorine- and/or bromine- or C_1-C_4-alkyl-substituted phenyl,

R^{25} represents hydrogen, in each case optionally fluorine-, chlorine- and/or bromine-substituted C_1-C_6-alkyl, C_2-C_6-alkenyl or C_2-C_6-alkynyl, C_1-C_4-alkoxy-C_1-C_4-alkyl, dioxolanyl-C_1-C_4-alkyl, furyl, furyl-C_1-C_4-alkyl, thienyl, thiazolyl, piperidinyl, or optionally fluorine-, chlorine- and/or bromine- or C_1-C_4-alkyl-substituted phenyl, or together with R^{24} represents C_3-C_6-alkanediyl or C_2-C_5-oxaalkanediyl, each of which is optionally substituted by C_1-C_4-alkyl, phenyl, furyl, a fused benzene ring or by two substituents which, together with the C atom to which they are attached, form a 5- or 6-membered carbocycle,

R^{26} represents hydrogen, cyano, halogen, or represents in each case optionally fluorine-, chlorine- and/or bromine-substituted C_1-C_4-alkyl, C_3-C_6-cycloalkyl or phenyl,

R^{27} represents hydrogen or in each case optionally hydroxyl-, cyano-, halogen- or C_1-C_4-alkoxy-substituted C_1-C_6-alkyl, C_3-C_6-cycloalkyl or tri(C_1-C_4-alkyl)silyl,

R^{28} represents hydrogen, cyano, halogen, or represents in each case optionally fluorine-, chlorine- and/or bromine-substituted C_1-C_4-alkyl, C_3-C_6-cycloalkyl or phenyl,

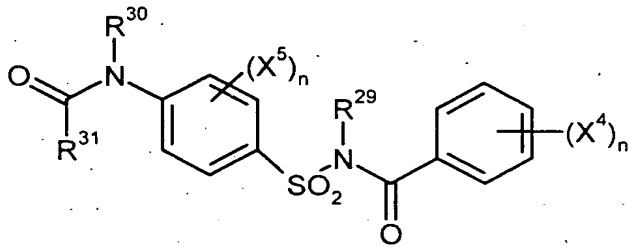
X^1 represents nitro, cyano, halogen, C_1-C_4-alkyl, C_1-C_4-haloalkyl, C_1-C_4-alkoxy or C_1-C_4-haloalkoxy,

X^2 represents hydrogen, cyano, nitro, halogen, C_1-C_4-alkyl, C_1-C_4-haloalkyl, C_1-C_4-alkoxy or C_1-C_4-haloalkoxy,

X^3 represents hydrogen, cyano, nitro, halogen, C_1-C_4-alkyl, C_1-C_4-haloalkyl, C_1-C_4-alkoxy or C_1-C_4-haloalkoxy,

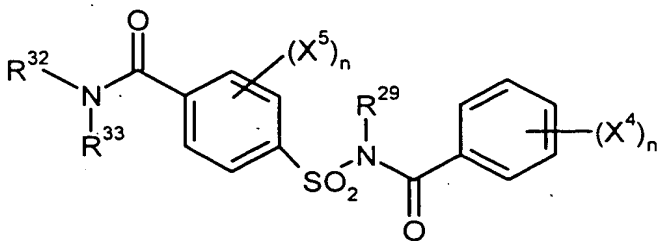
and/or the following compounds, defined by general formulae,

of the general formula (IId)



(IId)

or of the general formula (IIe)



(IIe)

where

n represents a number between 0 and 5,

R^{29} represents hydrogen or C_1-C_4-alkyl,

R^{30} represents hydrogen or C_1-C_4-alkyl,

R^{31} represents hydrogen, in each case optionally cyano-, halogen- or C_1-C_4-alkoxy-substituted C_1-C_6-alkyl, C_1-C_6-alkoxy, C_1-C_6-alkylthio, C_1-C_6-alkylamino or di-(C_1-C_4-alkyl)amino, or in each case optionally cyano-, halogen- or C_1-C_4-alkyl-substituted C_3-C_6-cycloalkyl, C_3-C_6-cycloalkyloxy, C_3-C_6-cycloalkylthio or C_3-C_6-cycloalkylamino,

R^{32} represents hydrogen, optionally cyano-, hydroxyl-, halogen- or C_1-C_4-alkoxy-substituted C_1-C_6-alkyl, in each case optionally cyano- or halogen-substituted C_3-C_6-alkenyl or C_3-C_6-alkynyl, or optionally cyano-, halogen- or C_1-C_4-alkyl-substituted C_3-C_6-cycloalkyl,

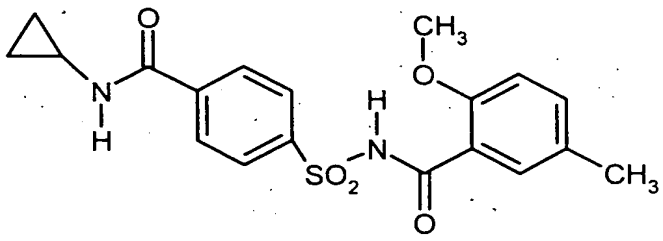
R^{33} represents hydrogen, optionally cyano-, hydroxyl-, halogen- or C_1-C_4-alkoxy-substituted C_1-C_6-alkyl, in each case optionally cyano- or halogen-substituted C_3-C_6-alkenyl or C_3-C_6-alkynyl, optionally cyano-, halogen- or C_1-C_4-alkyl-substituted C_3-C_6-cycloalkyl, or optionally nitro-, cyano-, halogen-, C_1-C_4-alkyl-, C_1-C_4-haloalkyl-, C_1-C_4-alkoxy- or C_1-C_4-haloalkoxy-substituted phenyl, or together with R^{32} represents in each case optionally C_1-C_4-alkyl-substituted C_2-C_6-alkanediyl or C_2-C_5-oxaalkanediyl,

X^4 represents nitro, cyano, carboxyl, carbamoyl, formyl, sulfamoyl, hydroxyl, amino, halogen, C_1-C_4-alkyl, C_1-C_4-haloalkyl, C_1-C_4-alkoxy or C_1-C_4-haloalkoxy, and

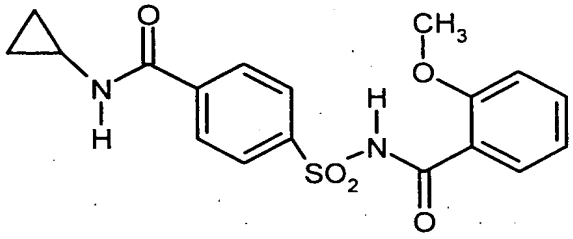
X^5 represents nitro, cyano, carboxyl, carbamoyl, formyl, sulfamoyl, hydroxyl, amino, halogen, C_1-C_4-alkyl, C_1-C_4-haloalkyl, C_1-C_4-alkoxy or C_1-C_4-haloalkoxy.

19. A composition as claimed in claims 18 where the crop plant compatibility-improving compound is selected from the following group of compounds:

cloquintocet-mexyl, fenchlorazole-ethyl, isoxadifen-ethyl, mefenpyr-diethyl, furilazole, fenclorim, cumyluron, dymron or the compounds



and



20. The composition as claimed in any of claims 18 or 19 where the crop plant compatibility-improving compound is cloquintocet-mexyl or mefenpyr-diethyl.

21. A method for controlling unwanted vegetation, characterized in that a composition as claimed in claim 18 is allowed to act on the plants or their habitat.

22. The use of a composition as claimed in claim 18 for controlling unwanted vegetation.

23. A method for controlling unwanted vegetation, characterized in that a compound of the formula (I) as claimed in claim 1 and the crop plant compatibility-improving compound as claimed in claim 18 are allowed to act on the plants or of their habitat separately, one soon after the other.